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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/081,967      | 02/22/2002  | Walid S.I. Ali       | US 020047           | 2220             |

24737 7590 12/17/2004

PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
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BRIARCLIFF MANOR, NY 10510

EXAMINER

DIEP, NHON THANH

ART UNIT PAPER NUMBER

2613

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/081,967

Applicant(s)

ALI, WALID S.I.

Examiner

Nhon T Diep

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/18/2003.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6-9, 11-14, 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Correia et al (Object Evaluation of Relative Segmentation Quality) cited by the applicant.

Correia et al discloses a method for evaluating segmentation quality comprising the same system for computing overall image quality for a composite image comprising: controller receiving image data composite image, the controller: segmenting the image data into segments corresponding different objects within the composite image (page 308, right column, ln. 31-33), computing an image quality for each segment (pages 309-310, paragraph 4), deriving an overall image quality value from the image quality values for all segments within the composite image (pages 310-311, paragraph 5) as specified in claims 1, 6, 11 and 16; wherein the controller, in segmenting the image data into segments corresponding to different objects within the composite image, employs motion vectors for pixels or pixel blocks within the image to identify the different objects (page 310: temporal accuracy, right column, ln. 34-37) as specified in claims 2, 7, 12 and 17; wherein the controller, deriving an overall image quality value from the image quality values for all segments within the composite image, associates an importance

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indicator with each segment rating an effect of the corresponding segment on image quality the composite image (page 310, paragraph 4.1) as specified in claims 3, 8, 13 and 18; wherein the overall image quality value is computed from the sum, for segments within the image, product the importance indicator for a segment and image quality value for that segment (pages 310-311, paragraph 5.3) as specified in claims 4, 9, 14 and 19.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 10, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Correia et al.

As applied to claims 3, 8, 13 and 18 above, it is noted that Correia et al does not particularly disclose the importance indicator for segment is computed from a relative size of the segment with respect to the composite image and an average estimated motion vector value for that segment as specified in claims 5 and 15. However, it is noted that Correia et al further indicates that the shape or relative size of object presents visible differences to human visual system and gets more degraded over time (page 311, right column, ln. 2-4) and the fidelity between motion in the reference and the estimated object (motion vector) is evaluated. It is also well known in the art that instead of using each individual motion vector values, an average estimated motion

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vector value is used for calculation the temporal accuracy of a moving object and therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the system of Correia et al by using a relative size of the segment with respect to the composite image and an average estimated motion vector value to compute the importance indicator for a segment. Doing so would help to improve picture quality and simplify the computing process.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Trew et al (US 6,687,405) discloses an image segmentation.

b. Gu (US 6,075,875) discloses a segmentation of image features using hierarchical analysis.

c. Myler et al (6,577,764) discloses a method for measuring and analyzing digital video quality

d. Ali et al (US 6,798,919) discloses a system and method for providing a scalable dynamic objective metric for automatic video quality evaluation.

e. Watson et al (US 6,493,023) discloses a method and apparatus for evaluating the visual quality of processed digital video sequences.


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhon T Diep whose telephone number is 703-305-4648. The examiner can normally be reached on m-f.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris S Kelley can be reached on 703 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ND  
10 Dec 2004

  
**NHON DIEP**  
**PRIMARY EXAMINER**